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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/940,594 | 08/29/2001 | Taminori Tomita | ASA-1029 | 5019 |

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EXAMINER

DAVIS, ZACHARY A

ART UNIT PAPER NUMBER

2137

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,594

Applicant(s)

TOMITA ET AL.

Examiner

Zachary A. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05 December 2005 has been entered.
2. By the above submission, Claims 1, 7, 16, and 17 have been amended. Claim 15 has been canceled. New Claims 18 and 19 have been added. Claims 1-12 and 16-19 are currently pending in the present application.

Response to Arguments

3. Applicant's arguments with respect to claims 1-12, 16, and 17 have been considered but are moot in view of the new ground(s) of rejection.

Election/Restrictions

4. In the explanation below, reference is made to the following inventions:

- I. Claims 1-12, 16, and 17, directed to a digital signature verification apparatus, classified in class 713, subclass 176.
- II. Claims 18 and 19, directed to a multiple digital signature verification apparatus, classified in class 713, subclass 180.

5. Newly submitted claims 18 and 19 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as verification of single digital signatures. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18 and 19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

6. The amendment filed 05 December 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the description of Figure 14 as illustrating "multiplexed digital signatures" is considered to be new matter. Although Applicant asserts that such amendment does not constitute new matter, the Examiner respectfully disagrees. Although the Examiner does not dispute that the disclosure originally described "an additional signature... applied to data to which a digital signature has been applied" (see page 12 of the present response), the Examiner believes that attempting to present the above-described application of a signature as a new definition of "multiplexing" constitutes new matter. The Examiner notes that multiplexing is well known in the art as the process of combining signals for transmission through a shared channel (see, for example, the attached definition from the Free On-Line Dictionary Of Computing, or FOLDOC). Because the term is well known, adding the term with a new definition without previously defining the term as such constitutes new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitations “multiplexed digital signatures”, “the ranges of said partial data are multiplexed”, and “a multiplex of digital signatures”. This is generally unclear, as this appears to contradict the well-known common meaning of the term “multiplex”, namely in a communication system, combining several signals for transmission through a shared medium (see the attached definition from FOLDOC). Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “multiplex” is indefinite because the specification does not clearly redefine the term. Although Applicant has amended the specification to include the term “multiplex” and ostensibly redefine the term, because the definition was not included in the disclosure as filed, the amendment has been considered to add new matter, as described in the previous section. Further, as noted above in the present

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section, the term appears to conflict with the art-accepted definition; therefore, the claim should be amended to more clearly reflect and recite what Applicant intends to claim as the invention. See MPEP § 2106 II.C.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al, US Patent 6671805, in view of Romney et al, US Patent 5872848.

In reference to Claim 1, Brown discloses an apparatus including a means for inputting digital signature data (column 13, lines 22-27; column 8, line 57-column 9, line 30), means for detecting the range of a part of data that is signed (column 8, lines 35-47), and a means for displaying the content of the detected data and the detected range of the data (Figure 2, Display Device 208; column 14, lines 46-49). Although Brown discloses that areas not part of the to-be-signed portion are masked and thereby delineated (see column 12, lines 56-67), Brown does not explicitly disclose a "frame" around the content of the partial data representing the range of the part of the data that is signed.

Romney discloses a system for digitally signing documents that includes a frame around the portion of the data that is signed (see Figure 6, indicators 610, 630, 650; column 8, lines 40-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Brown to include a representation of the range of the part of the data that is signed, in order to give an indication of what is encompassed by the digital signature (see Romney, column 8, lines 40-46) to allow more confidence in verification of the authenticity of the signature (see Romney, column 4, lines 28-52).

In reference to Claims 2 and 3, Brown and Romney further disclose analyzing information on the digital signature (see Brown, column 14, lines 53-57; see also Romney, Figure 9-2 and column 10, lines 4-18), which describes the signer (see Brown, column 14, lines 18-36; Romney, Figure 9-2; column 10, lines 4-18), and displaying the result of the analysis (Brown, column 14, lines 46-62; Romney, Figure 9-2).

In reference to Claims 4 and 5, Brown and Romney further disclose that the content of the part of the data that is signed is displayed (Brown, column 11, line 65-column 12, line 13; column 13, lines 13-21; column 14, lines 46-62; see Romney, Figures 6 and 9-1 through 9-3) and that the result of the analysis is displayed distinctly from the content (Brown, column 14, lines 46-62, noting especially that the ASCII representation of the signature can be displayed, lines 57-58; see also Figure 4D; see also Romney, Figures 6 and 9-1 through 9-3, noting that the content being signed, the analysis, and signature itself are all displayed distinctly).

In reference to Claim 6, Brown and Romney further disclose that the signature is described in XML (Brown, column 7, lines 39-45; column 14, lines 11-17).

In reference to Claim 16, Brown and Romney further disclose a plurality of data portions to which signatures are applied (Brown, column 8, lines 43-45; Romney, Figures 9-1 through 9-3) and that the content and range of the plurality of data portions are displayed (Brown, column 14, lines 46-62; Romney, Figures 9-1 through 9-3).

In reference to Claim 17, Brown and Romney further an additional signature being added to an already signed partial data, where the content and ranges of each partial data are displayed according to the signatures applied (see Romney, Figures 9-1 through 9-3; column 11, lines 1-25 and column 9, lines 35-45, where an authenticator signs a document including a portion already signed by a client).

Claims 7-12 are directed to a software implementation of the apparatus of Claims 1-6, and are rejected by a similar rationale.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Park et al, US Patent 5966445, discloses a multi-digital signature scheme.

- b. Ogilvie, US Patent 6324650, discloses a system for protecting message content, noting specifically that signatures can be performed on part of or several parts of a message and can be nested in various manners.
- c. Bisbee et al, US Patent 6367013, discloses a system in which digital signatures are chained such that an additional signature can be applied to an already signed document (see especially Figures 3 and 3A).
- d. Kuroda et al, US Patent 6470448, discloses a system for digital signatures which can include a multiple signature scheme.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A. Davis whose telephone number is (571) 272-3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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